TP3 Guidance Contents

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TP3 Program Criteria Overview

Prospect Level: To become a TP3 **Prospect**, an applicant submits a *TP3 Sign-up* card from the *TP3 Brochure* or on-line at the TP3 website (www.tp3.org). Your information will be entered into the TP3 database as a **Prospect** member.

Pledge Level: To advance to TP3 **Pledge**, a member submits a *TP3 Pledge Card* listing pollution prevention (P2) activities in the five areas: clean air, energy conservation, hazardous materials management/reduction, land and water conservation, and solid waste reduction. You will receive a *Pledge Certificate*.

Partner Level: To advance to TP3 **Partner**, a member will:

- Maintain Commendable Environmental Compliance for the past 3 years.
- Submit an *Environmental Policy Statement.*
- Submit the completed *Partner Permit Table.*
- Submit a *TP3 Plan* describing at least one new project for each pollution prevention area:
    1. Clean Air
    2. Energy Efficiency/Conservation
    3. Hazardous Materials Management/Reduction
    4. Land and Water Conservation
    5. Solid Waste Reduction – Reduce, Reuse, Recycle
- Choose the first project to implement from the *TP3 Plan*. A project implemented within the past 2 years may be used to attain the Partner level.
- Submit a *Success Story* on the first completed project. All success stories will be evaluated to ensure quality and completeness.

Maintaining Partner: Members wishing to remain at **Partner** will review their *TP3 Plan*, complete one new project, submit a *Success Story* on that project, and submit a list of community outreach activities by April 1, every third year after achieving **Partner**. The Partner's environmental compliance will also be reviewed every three years. The completed projects, *Success Stories*, and community outreach activities will apply toward **Performer** in the future when all other **Performer** criteria are met.

Performer Level: To advance to TP3 **Performer**, the member will:

- Maintain Commendable Environmental Compliance for the past 3 years.
- Complete the four remaining new projects described in the *TP3 Plan*
- Submit a *Success Story* for each of the four new projects
- Have an Environmental Management System (EMS) in place for at least one year *(see next page)
- Submit documentation demonstrating Community Outreach, which includes:
    - ❖ sharing the Environmental Policy with the public
    - ❖ sharing significant environmental issues, goals for improvement, and performance (non-proprietary)
    - ❖ conducting activities in the community to promote pollution prevention
- Submit documentation of Mentoring another TP3 member in pollution prevention
- Receive final approval from the Performer Level Review Panel for quality assurance and credibility

Maintaining Performer: The Performer's environmental compliance will be assessed each year. At least one new project *Success Story*, and updates on continued Community Outreach and Mentoring activities, will be submitted annually. Documentation of EMS certification will be confirmed every 3 years. ISO 14001 certification will be accepted without further review. UT-CIS will evaluate all other EMS every 3 years.

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*** TP3 Criteria for Environmental Management Systems (EMS)**

An EMS is an organization's systematic tool to meet its environmental requirements and improve its overall performance. For initial **Performer** level consideration, a TP3 **Partner** member must demonstrate an EMS successfully operating for at least one year. The EMS must contain the key elements detailed below. Industry and regulated businesses, using Best Management Practices (BMPs) to address non-point source pollution, must demonstrate successful implementation and maintenance of appropriate BMPs for the previous year. Because each facility is unique, the scope and formality of its EMS items will vary according to its size, sector, and complexity. A qualifying EMS* includes the following key elements:

Policy

- Write, communicate, implement and maintain an Environmental Policy committing to:
  - Compliance with legal requirements and voluntary commitments beyond compliance
  - Prevention of pollution (pollution prevention, recycling, BMPs, proper treatment and disposal)
  - Continual improvement in environmental performance, including areas not subject to regulations
- The policy statement describes top management support of the EMS, and proclaims their commitment to pollution prevention and environmental protection.

Planning

- Establish a process to identify and review significant environmental aspects, legal requirements and voluntary commitments beyond compliance, including procedures for integrating anticipated changes to the facility's requirements.

- Establish and maintain measurable objectives and targets to meet policy commitments, legal requirements, and voluntary commitments beyond compliance, to reduce the facility's significant environmental impacts, and to meet the performance commitments made as part of the facility's participation in the TP3 program. *In setting objectives and targets, the facility should consider preventing non-compliance, preventing pollution at its source, minimizing cross-media pollutant transfers, and improving environmental performance.*

- Include the means and time frames for the completion of EMS objectives, targets, and commitments.

*Note: Environmental Management Systems, such as ISO 14001 and Responsible Care, are examples of good systems that will meet the TP3 criteria for an EMS.

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***TP3 Criteria for Environmental Management Systems (EMS) -- continued**

Implementation and Operation

- Establish roles and responsibilities for meeting EMS objectives and targets. Include top management representatives with authority and responsibility for the EMS.
- Define procedures to:
    - Achieve and maintain compliance, meet performance objectives and voluntary commitments beyond compliance.
    - Communicate relevant information regarding the EMS, including the facility's environmental performance, throughout the organization.
    - Provide appropriate incentives for personnel to meet the EMS requirements.
    - Provide for document control, including where EMS documents will be located, who will maintain them, and the process for review and revision.
- Provide general environmental training programs for all employees. Continue with specific training for those employees whose jobs and responsibilities involve activities directly related to achieving objectives and targets, compliance with legal requirements and commitments beyond compliance.
- Establish documentation of the key EMS elements.
- Manage records in an identifiable, traceable, protected system. Include equipment calibration, training records and results of audits and reviews.
- Document operation and maintenance programs for equipment and for procedures related to legal compliance and significant environmental aspects.
- Establish and maintain procedures to identify accident potential. Regularly communicate an emergency preparedness program; periodically test emergency preparedness where practicable.

Assessment and Corrective Action

- Establish and maintain documented procedures for assessing performance, preventing and detecting legal non-conformance, and other requirements of the EMS, including an established compliance audit program and an EMS audit program.
- Establish an active program for prompt, corrective action of any non-conformance with legal requirements and other EMS requirements.

Management Review

- Provide for regular, documented management review based on established objectives and targets, significant environmental aspects, legal requirements, continual improvement in environmental performance and voluntary commitments beyond compliance.

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TP3 Definitions

Commendable Environmental Compliance – A determination, following a coordinated review by the TDEC Enforcement Coordinator, TP3 Program Coordinator, and Staff TP3 Contact, that shows no significant non-compliance with federal, state, and local laws. Proper notice of name change, merger, acquisition, etc., relevant to compliance reporting, shall be up-to-date.

Community Outreach – Action of building a relationship based on performing projects and sharing environmental information with a member's local community to provide clarification, education, and interaction.

Environmental Aspect - Element of an organization's activities, products, or services that can interact with the environment.

Environmental Management System (EMS) – A systematic tool to meet environmental requirements and improve performance through policy, planning, operation, corrective action, and management review.

Environmental Policy Statement (EPS) – A formal, written statement that describes a member's strategy for maintaining a safe workplace, minimizing pollution, promoting environmental education, and communicating environmental issues to the public.

Level – Status attained within the Tennessee Pollution Prevention Partnership by meeting specific criteria. Each level achieved has cumulative rewards and recognition.

Mentoring – The action of building a relationship with current or prospective TP3 members based on sharing pollution prevention information from a knowledgeable member to a learning member; especially signing new Prospects, helping them understand TP3, and assisting them and current members to advance through the levels.

New Project – A future project or a project that has been implemented but has not produced measurable results.

Performer Level Review Panel (PLRP) – A committee composed of representatives from environmental groups, industry, higher education institutions, and government agencies, whose task is to review TP3 Performer Applicants. The PLRP is a group of environmental professionals, selected from the Tennessee Pollution Prevention Roundtable, ensuring credibility and quality assurance for TP3's highest level of recognition.

Pledge Card – The tear-off, mail-in card only available in the Pledge level printed information. By submitting a *Pledge Card*, a member commits to continue positive environmental activities already in place or to begin new ones.

Pollution Prevention (P2) – Minimizing environmental impacts through source reduction and sustainable practices.

Success Story – Written documentation of a completed pollution prevention project. Acceptable *Success Stories* will include a description of the TP3 member, environmental issue being addressed, methods of implementation, cost savings, and the measured amount of pollution prevented.

Tennessee Pollution Prevention Partnership (TP3) – Tennessee's statewide network of households, schools, government agencies, organizations, businesses, and industries, working together to protect our shared environment through pollution prevention.

TP3 Plan – A document describing how a TP3 member will implement pollution prevention projects in five areas: clean air, energy conservation, hazardous materials management/reduction, land and water conservation, and solid waste reduction. The *TP3 Plan* should focus on reducing and eliminating significant environmental aspects that negatively impact the environment.

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TP3 Partner Level Criteria

The Office of Environmental Assistance is pleased with your interest in becoming a **Partner** in the Tennessee Pollution Prevention Partnership. The *Partner Packet* will help you accomplish the criteria for this level. To advance to TP3 **Partner**, follow these steps:

1. Maintain commendable environmental compliance for the past 3 years, if applicable.
2. Submit an *Environmental Policy Statement.*
3. Submit the completed *Partner Permit Table,* if applicable.
4. Submit a *TP3 Plan* using *Guidelines for Writing a TP3 Plan*. Design new projects for each pollution prevention area:
   - Clean Air
   - Energy Conservation
   - Hazardous Materials Management/Reduction
   - Land and Water Conservation
   - Solid Waste Reduction (Reduce, Reuse, Recycle)

   Describe each project, the issue it addresses, the expected measured results, when the project will be implemented, and when the project will be completed.
5. Choose and implement the first project from the *TP3 Plan*. A project completed within the past 2 years may be included in the plan and serve as the first project.
6. Submit a *Success Story* on the first completed project. Use the *Guidelines for Writing a Success Story*. All Success Stories will undergo evaluation by the TP3 Contact and OEA staff to ensure quality and completeness.

The *Partner Packet* includes:

- *TP3 Partner Criteria*
- *P2 Checklist, P2 Project Ideas,* and *P2 Evaluation* - help you evaluate your facility to improve environmental management. EPA sector P2 guides may also be used. **It is not necessary to answer every question or send us the results of your P2 Evaluation**. Its purpose is to reveal pollution prevention opportunities and inspire your creativity in designing projects for your *TP3 Plan.*
- *Partner Permit Table* - complete and submit with your draft *TP3 Plan*
- *Guidelines for Writing a TP3 Plan* - outlines the steps to follow and the elements of your *TP3 Plan*. Your TP3 Contact can provide assistance with developing the *TP3 Plan.*
- *TP3 Plan Format*
- *Sample TP3 Plan*
- *Guidelines for Writing a Success Story* - outlines the elements of a Success Story.
- *Success Story Format* - the format for writing a coherent article documenting how your project from the *TP3 Plan* was successful in preventing pollution, conserving natural resources, and reducing costs.
- *Sample Success Story*

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When the draft *TP3 Plan* is complete, e-mail the *Plan* and the *Partner Permit Table* to your TP3 Contact, who will help you develop a satisfactory plan. Be sure that you have relevant baseline data (e.g., utility costs, waste volumes or weights) for comparison after your projects are implemented. You will need "before and after" numbers for calculations to include in your *Success Stories.*

Wait to submit your first *Success Story* after your *TP3 Plan* is approved. After the completed project demonstrates a measurable quantity of pollution prevention, write the *Success Story*. The *Success Story* must reflect measurable results, unless previously discussed with the TP3 Contact.

When the first *Success Story* is drafted, e-mail it to your TP3 Contact for review. When the final version is approved and all other Partner criteria are met, we will send your Partner Rewards. With your agreement, your Success Story may be used in OEA workshops, presentations, and on the Web as an example of environmental stewardship.

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GUIDELINES FOR WRITING A TP3 PLAN

1. Review the *P2 Checklist, P2 Project Ideas,* and *P2 Evaluation* documents to help identify opportunities to save money and reduce impacts on the environment. EPA P2 materials can also be used.
2. Design new projects for each pollution prevention area:
   - Clean Air
   - Energy Efficiency/Conservation
   - Hazardous Chemicals Management/Reduction
   - Land and Water Conservation
   - Solid Waste Reduction (Reduce, Reuse, Recycle)
3. Use the *TP3 Plan Format* to develop and submit the *TP3 Plan*. Include (what, where, why, how, how much, and when) the following:
   - a brief description of the current conditions that each project will address
   - a brief description of each project
   - estimated project goals for improving baseline conditions
   - methods of measuring the amount of pollution prevented after the projects are completed
   - projected dates for implementing and completing the projects
4. Choose the first project to implement. Identify this project by placing an asterisk (*****) in front of the title. A project completed up to two years prior to writing the *TP3 Plan* may serve as the first project.
5. Describe the method established to measure the success of each project. This method will be used to calculate the project's performance, in comparison to its baseline measurement before the project was implemented. Projects without measurable results must be discussed with the TP3 Contact. The calculated measured results go under the heading of **The Pollution Prevented** in the *Success Story*.
6. Please submit the plan to your TP3 Contact as an e-mail attachment.

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Guidelines for Writing a TP3 Success Story

Please use the *Success Story Format*. This format promotes consistency for all *Success Stories* and will allow them to be readily used for public recognition. **If a *Success Story* contains proprietary and/or confidential information, you can request that the story <u>not</u> be published.**

1. Complete all the information at the top of the form. If there is no logo or Internet address, please leave those areas blank. The *Success Story* format is designed in two columns.

2. **Success Story Title –** Create a descriptive title for your story. Make sure the title of the story includes the project area: Clean Air, Energy Conservation/Efficiency, Hazardous Materials Management/Reduction, Land and Water Conservation, Solid Waste Reduction (Reduce, Reuse, or Recycle). Refer to the *Sample Success Story* for ideas.

3. **The Member –** Provide background information about your school, government agency, organization, business, or industry.

4. **The Story –** Give background information on the conditions that existed before implementing the project, a concise description of the project, and any challenges that were overcome.

5. **The Success –** Explain the general goal and results of the project, including implementation costs, and resulting cost savings. How were measurements made?

6. **P2 Illustration** (optional) **–** Include an explanatory chart, graph, or photo to illustrate the success.

7. **The Pollution Prevented –** Provide the calculated, measurable results of the project as explained in the *TP3 Plan*. Include the measured units of pollution prevented to air, land and/or water that are appropriate to the project area.

8. **Date –** Provide the date the *Success Story* was written.

P2 Project Ideas

Clean Air

a. Use vapor recovery systems to capture volatile compounds that can be reused instead of released.
b. Substitute volatile solvents with non-volatile solvents (such as water).
c. Map processes for areas where hazardous air emissions occur. Determine ways to reduce, recover, or eliminate the emissions through process controls.
d. Subscribe to Green Power Switch through your local electric utility, an investment in renewable energy sources that reduce air pollution from coal-fired power plants.

Energy Conservation

a. Use waste heat from processes to heat the building. Waste heat can also be used to dry paint.
b. Replace incandescent lights with fluorescents.
c. Replace older fluorescents with newer more efficient fluorescents
d. Replace older magnetic ballasts with electronic ballasts. Replacing 100 T12 lamps and magnetic ballasts with T8 lamps and 75% electronic ballasts will save $872 in energy costs per year. The payback time for this retrofit is approximately 2.7 years. Replacing incandescent lights with fluorescents will have an even greater return.
e. Make sure heat exchangers and filters are clean.

Hazardous Chemicals Management/Reduction

a. Ask supplier for chemicals with a lower volatile content. (One small business used this method to reduce HAP emissions by over 5 tons per year, which put them below the level requiring a Title V permit.)
b. Consider exchange of excess chemicals with other companies who may need them, rather than disposal. (Tennessee Materials Exchange Program at www.cis.utk.edu)
c. Research if there are less hazardous chemicals that can be substituted.
d. Reduce the use of pesticides and herbicides in buildings and on grounds.
e. Distill used solvents. Not only does this save money on solvent purchases, but also reduces the amount of hazardous waste for disposal.

Land and Water Conservation

a. Consider the use of “gray water” for industrial processes.
b. Install low-flow toilets and faucet sensors or automatic shut-offs in restrooms.
c. If a process requires a wash with water, consider ways to reuse the water. Some companies have instituted a water recovery system that uses the same water several times before discharging to treatment.
d. Repair erosion gullies on your grounds, using effective methods.
e. Make process changes that reduce pollutant discharges to rivers. Make continual improvements toward “beyond compliance” with NPDES permit.
f. If applicable, institute effective controls to keep cattle waste, herbicides, and pesticides out of streams.

Solid Waste Reduction

Reduce

a. Reduce the amount of packaging used.
b. Reduce paper by using electronic files and e-mail.
c. Buy recycled-content products to reduce using new resources.

Reuse

a. Determine if there are other uses for wastes.
b. Provide a “take back” packaging program for customers to return re-usable packaging.
c. Consider exchange of excess materials with other companies who may need them, rather than disposal. (Tennessee Materials Exchange Program at www.cis.utk.edu)

Recycle

a. Institute a company recycling program for office paper and drink containers (glass, plastic, and aluminum)
b. Find sources for recycling materials that would have been disposed. For example, fluorescent lights and ballasts can be recycled. Coal-fired boiler cinders and ash can be recycled into lightweight concrete blocks. Wooden pallets can be chipped or shredded for mulch.

P2 Checklist for Industry, Regulated Business, Government, and Higher Education

This checklist can help identify opportunities to reduce impacts on the environment and save money.

MATERIAL RECEIVING

- Establish a centralized purchasing program.
- Use a "Just-in-Time" ordering system to prevent overstocking of raw materials and hazardous materials, which may become obsolete or outdated.
- Initiate a first-in-first-out (FIFO) use policy for all materials purchased.
- Establish an inventory control program to trace chemicals from cradle to grave.
- Inspect material before accepting a shipment to ensure material is to specifications and that containers are in good condition.
- Date materials containers as received.
- Rotate chemical stock.
- Develop a running inventory of unused chemicals for other departments' use or advertise with a waste exchange.
- Select quantity and package type to minimize packing waste. Use rinseable/recyclable or reusable containers.
- Switch to a less hazardous raw material.

RAW MATERIAL AND PRODUCT STORAGE

- Establish a spill prevention, control, and countermeasures plan.
- Maintain Material Safety Data Sheets to ensure correct handling of spills.
- Install overflow alarms for all tanks and vessels.
- Store containers in such a way as to allow for visual inspection for corrosion and leaks.
- Provide a covered area to protect materials and containers from degradation due to sunlight and precipitation.
- Provide adequate lighting in the storage area.
- Maintain distance between different chemicals to prevent cross-contamination.
- Stack containers in a way to minimize the chance of tipping, puncturing, or breaking.
- Install secondary containment areas.
- Cover individual containers to prevent evaporation, contamination by foreign particles and the frequency of spills. Use floating-roof tanks for VOC control.
- Use vapor recovery systems.
- Maintain a clean, even surface in transportation areas.
- Empty drums and containers thoroughly before cleaning or disposal.
- Use proper tools and procedures for moving containers.

OPERATION AND PROCESS CHANGES

- Perform overall material balances and estimate the quantity and dollar value of all losses.
- Inspect equipment, pumps, valves and pipes for leaks.
- In products and plant maintenance, consider using low VOC paints and coatings, and improve paint spray equipment and technique to minimize waste.
- Maximize dedication of process equipment to reduce cleaning frequency.
- Plan production schedule to reduce the generation of hazardous waste and to allow lower cleaning frequency. For example, schedule tint mixing from light to dark to avoid excessive cleaning.
- Use squeegees and wipers to recover residual materials prior to rinsing.
- Use centrifuge or other methods to remove excess solvent in cleanup rags before laundering.
- Clean equipment immediately after use to minimize the amount of solvent needed.
- Use cleaning systems that avoid or minimize solvents and clean only when needed.
- Standardize solvent usage within the facility and reclaim solvent by distillation.
- Consider substituting aqueous cleaners for petroleum-based or chlorinated solvents.
- Consider biodegradable and less toxic cleaners.
- Segregate waste streams to improve opportunities for recycling.
- Look for another company to accept your waste by-product and explore waste exchanges.

WATER CONSERVATION

- Identify water inflow and outflow from each unit and consider opportunities for in-process recycling.
- Use high pressure, low volume water nozzles.
- Maximize dry cleanup -- attempt to cleanup as much as possible before hosing down surfaces.
- Reduce use of constant running sinks.

ENERGY EFFICIENCY

- Conduct an energy audit that addresses heating/cooling, lighting, steam losses, and motors.
- Eliminate waste heat by insulating piping and heat generating equipment.
- Consider cogeneration and renewable energy.
- Consider switching to fluorescent lights with electronic ballasts, low mercury vapor lamps, compact fluorescents, low- energy "Exit" signs, solar-powered exterior lighting, timed switches and motion sensors.
- Reduce vehicle fleet and employee trips.
- Purchase energy efficient office equipment that offers a low-power "sleep" mode when not in use.
- When building or renovating, increase daylight in workspaces, and use energy efficient building materials.

MANAGEMENT

- Emphasize the importance of pollution prevention to staff by explaining the economic and environmental ramifications of hazardous waste general and disposal, raw materials usage, and worker safety.
- Establish facility-wide pollution prevention goals.
- Perform facility-wide pollution prevention opportunity assessments.
- Provide training for proper handling of materials and operation of equipment to minimize material waste and energy and water use.
- Consider closer supervision to improve production efficiency and reduce inadvertent waste generation.
- Create forums for employees and supervisors to identify ways to reduce waste.
- Solicit and reward employee suggestions for waste reduction ideas.
- Allocate waste treatment and disposal costs to the operations that generate the waste.
- Allocate utility costs to specific processes or products.
- When planning any future plant modernization, consider more efficient equipment, which can reduce waste volumes while meeting or exceeding current production rates.
- Consider modifying the specifications, design or composition of your product to reduce life-cycle costs. Look for ways to reduce the waste generated and raw materials and energy consumed after your product leaves your facility. For example, reduce packaging, increase the energy efficiency and durability of your product, make replacement parts available, lower its toxic content, and use recyclable/reusable/ returnable components.

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POLLUTION PREVENTION (P2) EVALUATION

This ***Pollution Prevention (P2) Evaluation*** is for your own use and **SHOULD NOT** be returned to us. The sets of questions below are organized into the areas that your ***TP3 Plan*** should include. If the concept of pollution prevention is new to you, these questions will help you look at your home, school, or work place from a new perspective. The questions may require some investigation into records of utility bills, amounts of waste produced and recycled, and your group's habits regarding purchasing, transportation, and hazardous materials management. It is our hope that you will begin keeping these records and paying attention to pollution prevention opportunities. Some questions may not apply to you. Historical information, as well as current record keeping, will be important for calculating **The Pollution Prevented** in writing your ***Success Stories***.

General Information

How many buildings do you maintain?
When were the buildings constructed?

What is their square footage?

What are the outside walls made of?
What is the roof made of?

What is the total acreage around the buildings?
How is the land-use divided?

How many members (family, students, staff, employees) use your facility?

CLEAN AIR

How many people at your facility use these modes of transportation to travel to work or school?
Individual vehicle
School bus
City bus
Rideshare (carpool, vanpool)
Bicycle
Walk

Do you maintain a fleet of vehicles?
Has fuel efficiency been considered with new purchases?
Is vehicle maintenance performed on a regular basis?

What time of day does mowing take place? (morning and evening is best to avoid ozone formation from burning of fossil fuels during peak heat of the day)

Is lawn-care equipment well maintained?

Is there awareness of ozone emissions by office equipment?

Are copiers and printers in well-ventilated areas?

Are climate control duct filters changed regularly for good indoor air quality?

Do you avoid using supplies with volatile fumes and vapors?

Has the building been tested for radon?

How many employees, students, or members of your group suffer from asthma or other respiratory ailments?

Has their condition been considered for making improvements in indoor air quality?

ENERGY EFFICIENCY/CONSERVATION

(Promotes clean air by reducing burning of fuels)

What is the average monthly cost for each of your energy sources?
Propane or natural gas -
Electricity -
Wood -
Other -

How much electricity did you consume last year?

Have you started any energy conservation initiatives?
If yes, what?

Has there been an effort to purchase energy-efficient appliances? (Look for EPA EnergyStar label)

Has there been any installation of alternative energy sources (solar, geothermal, etc.)?

Do you purchase "Green Power" through your electric utility?

Heating and Cooling

What energy source(s) provides heat?

What energy source(s) provides cooling?

If you have central heat and air, what are thermostat settings in different locations and in different seasons?

Is the air conditioning system serviced (filters cleaned or replaced) on a regular basis?
How often?

Are some rooms over-cooled or over-heated?

Are thermostat settings modified for nights, weekends, and holidays?

If there is no central air conditioning, are there window air conditioners?

If propane or natural gas is used as an energy source for heating only, is the pilot light turned off during the summer?

Are windows and doors kept shut when the air conditioning is running?

Is there any use of passive solar energy in the design of your building(s)?

Do you open windows/doors to help moderate indoor temperatures during spring and fall?

Are curtains/blinds closed in the summer if sunlight is shining directly into the room?

Are there large deciduous trees to help shade the building(s)?

Are evergreen trees used for windbreaks on the north side of the building(s)?

Lighting

What kinds of light bulbs are used (e.g., fluorescent, halogens, incandescent, compact fluorescent, sodium)?

Have the most energy efficient bulbs been installed?

Are lights turned off when a room is unoccupied?

Are walls painted a light color to maximize lighting?

If tube fluorescent lights are used, do they have the proper ballasts to support the longest bulb life?

Do you use photocell controls for?
Do outside lights have motion sensors?

Do EXIT signs have energy-efficient bulbs (low-wattage compact fluorescents are recommended)

Is there any use of solar photovoltaic lighting?

Water Heating

What is the energy source for heating water?

What is the volume of your water heater?

Is the hot water tank insulated to prevent heat loss?

At what temperature is the water heater thermostat set? (105-115°F should be adequate)

Are the hot water pipes insulated to keep hot water from cooling down?

Is the water heater pilot light turned off during vacation?

Have low-flow showerheads been installed?

Is heated water wasted due to dripping faucets?

Insulation

Are there drafts around doors and windows?
If yes, identify.

Are outside doors insulated?

Are the electrical outlets on the outside wall of the building drafty?

Are any windows cracked or broken?

How many windows are single, double, or triple-pane?

Are there storm windows on single-pane windows?

Are there window coverings to reduce heat loss in winter?

Is the roof adequately insulated for weather conditions? (7-9 inches of insulation is recommended for our area)

Kitchen or Cafeteria

What fuel provides energy for cooking?

Is a dishwasher in use in the kitchen?

Is the temperature of the dishwasher set at 180°F?

Is the dishwasher operated only when full?

Is a cold-air dry cycle used?

Do refrigerator and freezer doors seal well?

Is the refrigerator or freezer located away from heat sources?

Are refrigerator coils cleaned regularly?

HAZARDOUS MATERIALS MANAGEMENT / REDUCTION

Inventory your facility for hazardous materials:
Grounds maintenance (fertilizers, pesticides, herbicides, fungicides)
Kitchen
Art and/or office supplies
Cleaning supplies
Laboratories

Do you use Integrated Pest Management (IPM), an alternative pest control that will reduce toxic exposure to humans and the environment?

Are hazardous materials stored in tight, well-labeled containers and locked in closets or cabinets?

Do you inventory chemicals on a regular basis?
How often?
Are outdated materials properly disposed? (Household Hazardous Waste Collection, or hire an environmental consultant)

Is used motor oil recycled?

Are car batteries exchanged with new purchase and household batteries disposed of safely?

Have new construction projects used "green" building materials? (fiberboard without VOCs, water-based paints and solvents, arsenic-free pressure-treated wood)

Are chemicals used with proper ventilation?

LAND AND WATER CONSERVATION

What is the source of your water supply?

What are the uses of water in your facility? (Make a list)

How much water is used each month (check water bill)?

Have low-flush toilets been installed, or volume-reducing devices placed in tanks?

How many faucets are in your building(s)?
How many are difficult to turn off and may be found running?

Are there faucets with aerators or other water conservation devices?
Where and how many?

Are there leaky faucets, toilets?
The Waterwiser Website provides a “drip calculator”

How is sewage disposed?
If you have a septic system, is it functioning properly?
How long ago was it pumped?

Which water body receives the wastewater?

Where does parking lot storm water go?

What kinds of wildlife have you seen on your grounds?

Are there any bird feeders or animal feeding stations provided?

Is there a creek or pond on or near your grounds?

Are there trees, shrubs, or flower gardens on your grounds? (Circle)

Does this vegetation provide food and cover for wildlife?

Is there an effort to plant native Tennessee plant species?

Has drought-tolerant landscaping been used on your grounds?

Are there non-native invasive plant species on your grounds? (Japanese or bush honeysuckle, privet, multi-flora rose, etc.)

Are gardens mulched to conserve moisture?

How are the plants watered? (precipitation only, hose and sprinkler system, drip irrigation system?)

Is watering system on a timer?

Is garden watering done in the early morning or late evening to prevent evaporation?

Are there leaks in the outdoor hoses or sprinkler system?

Is there evidence of erosion anywhere on your grounds?
If yes, where, and what is the cause?
Where does the eroded soil go?

SOLID WASTE REDUCTION

(Reduce, Reuse, Recycle)

Do you have trash pick-up, or do you haul your trash to a convenience center?

Where does your trash go? (local landfill, distant landfill, incinerator)

How often is waste taken away?

On average, how much waste (weight or volume) is produced between disposal times?

What activity produces the largest amount of waste in your building(s)?

Would you consider doing a waste audit?

Reduce

Do you purchase any items in bulk to avoid excess packaging materials (thereby reducing waste)?

What items?

Do you utilize washables (plates, cups, and utensils; cloth napkins and towels) rather than disposables (paper/plastic/Styrofoam plates, cups, and utensils; paper napkins and towels)?

Do you use both sides of paper when handwriting, copying, or printing?

Do you share magazines and newspapers before disposing of them?

If you have an office, do you use e-mail and electronic technologies among your staff and outside contacts to minimize the use of paper?

Reuse

Do you consider possible ways to reuse before you discard items?

Are containers and/or plastic bags reused before disposing of them?

Is an effort made to reuse envelopes, packing boxes, and packing materials to avoid throwing them away?

Do you use rechargeable batteries?

Do you donate unwanted, good-condition items (clothing, toys, furniture) to charity or to a yard sale?

Have you asked the manufacturer of your copier and printer toner cartridges if they can be returned for refilling?

Recycle

Do you have curbside recycling service or do you use a recycling drop-off center?

Do you recycle glass, plastic, office paper, cardboard, magazines, newspapers, phone books, junk mail, steel cans, aluminum cans, other metals? (Circle)

Over the last year, how much waste (weight or volume) was recycled?

Do you have figures for amounts of each category (glass, plastic, etc.) that was recycled?

If yes, list.

Have you recycled outdated or broken computers?
They contain hazardous materials. Please do not donate obsolete computers to schools or charities, or dispose of them in landfills.

Is there a composting or mulching program for food scraps, grass clippings, and leaves from your grounds?

If yes, is the compost used somewhere on the grounds?

Are recycling bins located in strategic locations to make recycling easy for everyone?

Are recyclables still found in the trashcans?
Does someone recover recyclables from the trash?

Is there a net profit made from recycling?
If so, how is that money used?

Who handles your purchasing?

What paper products are purchased?

Which paper products, if any, contain recycled content, and what percentage is post-consumer waste?

Are any other products purchased that are made from recycled materials or with recycled content?
If yes, list these products.